



Solid. Power. Solution



User's Manual

**Prudent Way Professional Series Power Supply
PWI-PR550, PWI-PR500, PWI-PR450, PWI-PR400**

Prudent Way Superior Series Power Supply User's Manual
ATX 12V version 2.2 &2.0
Models: PWI-PR550 (2.2v), PWI-PR500 (2.2v), PWI-PR450 (2.0v), PWI-PR400 (2.0v)

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Thank you for choosing Prudent Way Professional Series Power Supply. Please take the time to read the following instructions before installing the power supply. Please note that failure to follow the proper procedures may cause severe harm to your body and PC components.

We sincerely hope that you find this quality power supply provides you with many years of good service.

1. Introduction

The Prudent Way Professional Series power supply provides solid power solution for any professional use. It's highly efficient with the latest smart fan technology to save energy and reduce noise for the computer system. The stylish dual crystal blue ball bearing fans are designed to provide extra air flow to the PC. The smart cable management feature reduces clutter in the PC and further reduces the heat generated. Professional Series power supply adapts RoHS compliant materials so it's more environmentally friendly. The excellent quality of Professional Series power supply is backed up by a 3 year warranty to display the enduring value, all at a friendly price.

2. Safety & Warning

Please read the following information carefully before using the power supply.

- ✖ DO NOT take apart, add to, or remove any components from the power supply. There are HAZARDOUS VOLTAGES inside the power supply. Warranty will be voided by doing so.
- ✖ DO NOT expose the power supply or computer to water or moist, dusty or extreme temperature environments.
- ✖ DO NOT use wet hands to plug or unplug the power cord.
- ✓ DO grab the plug instead of cord when you remove the power cord from the wall outlet.
- ✓ DO switch off and unplug any power sources before attempting any cleaning to avoid electrical shock. Use a dry cloth only.

3. Installation

- Step 1. Read the Safety and Warning information above.
- Step 2. Disconnect the power cord from the old power supply.
- Step 3. Open your computer case by following your computer case manual.
- Step 4. Disconnect all of the power connectors from the motherboard and peripheral devices such as hard drive, optical drives, floppy drives, case fans, etc.
- Step 5. Make sure the AC voltage switch is set to the right voltage. Failure to do so may damage power supply. United States voltage is 115V.
- Step 6. Remove the existing power supply from your computer case and replace it with your new Professional Series power supply.






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- Step 7. Assemble the power supply and screw it in your PC's correct power supply position.
- Step 8. Connect the 24-pin main power connector (Table 1). If your motherboard uses a 20-pin connector, detach the 4-pin attachment on the 24-pin power connector.
- Step 9. Connect all other connectors to drives and peripheral correctly (Table 1).
- Step 10. Make sure all connectors are connected correctly.
- Step 11. Screw and close the side panel of your PC case.
- Step 12. Plug in the power cord to the power supply. Switch the on/off (I/O) button to "I". The system is now ready to go.



Table 1

Connector	Image	Number of Pins	Qty	Function
Main Power Connector		20+4	1	Provide CPU, motherboard, memory, PCI, AGP, USB hub with power.
ATX 12 V 2.2 Power Connector		8	PWI-PR550: 1 PWI-PR500: 0 PWI-PR450: 0 PWI-PR400: 0	For processor
ATX 12 V Power Connector		4	1	For processor
Peripheral Power Connector		4	PWI-PR550: 8 PWI-PR500: 8 PWI-PR450: 6 PWI-PR400: 6	For, hard drive, IDE type optical drive and other peripherals
PCI Express Connector		6	PWI-PR550: 2 PWI-PR500: 2 PWI-PR450: 1 PWI-PR400: 1	For PCI Express Card

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SATA Connector		5	2	For serial ATA type HDD and other peripherals
Floppy Drive Connector		4	2	For floppy drive

4. Product Specification

Features	PWI-PR550 W	PWI-PR500W	PWI-PR450W	PWI-PR400W
Type	ATX12V V. 2.2 (dual 12V)		ATX12V V. 2.0 (dual 12V)	
Switches	ATX Logic On/Off Additional Power Rocker Switch (115/230V selector switch)			
Maximum Power	550 W	500W	450W	400W
Transient Response	+5V,+12V and 3.3V outputs return to within 3% in less than 1ms for 25% load change			
Power Good Signal	100 - 500 ms			
Over Voltage Protection Recycle AC to reset	+12V1/+12V2=13.4V-15.6V, +5V=5.7V-7.0V,+3.3V=3.7V-4.3V			
Special Connectors	1 Main Connector (20+4 pin)			
	1 12V (P4)			
	8 Peripheral		6 Peripheral	
	2 SATA			
	2 Floppy			
	2 PCI-E 12V		1 PCI-E 12V	
	4 pin-8pin Adapter	Nil	Nil	Nil
Dual +12V	Yes			
SLi Support	NVIDIA SLi Certified		No	No
Fans	9cm x 8cm with Smart Fan Control		8cm x 8cm with Smart Fan Control	
Cables	Black Sleeved Cables			
DIMENSIONS				
Unit Size	5.9" (W) x 5.5" (D) x 3.4" (H)			
Net Weight	4.8lb			
OUTPUT (550W)				
Output Voltage	+3.3V	+5V	+12V1	+12V2
Max. Load	34A	36A	18A	18A
Min. Load	0.5A	0.3A	1A	1A
Regulation	+5%	+5%	-5+7%	-5+7%
Ripple & Noise (mV)	50mV	50mV	120mV	120mV
Available Power	112.2W	180W		432W
Total Power	550W continuous maximum at full load			
OUTPUT (500W)				
Output Voltage	+3.3V	+5V	+12V1	+12V2
Max. Load	32A	33A	17A	17A
Min. Load	0.5A	0.3A	1A	1A
Regulation	+5%	+5%	-5+7%	-5+7%
Ripple & Noise (mV)	50mV	50mV	120mV	120mV

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Available Power	105.6W	165W		408W
Total Power	500W continuous maximum at full load			
OUTPUT (450W)				
Output Voltage	+3.3V	+5V	+12V1	+12V2
Max. Load	32A	32A	16A	17A
Min. Load	0.5A	0.3A	1A	1A
Regulation	+5%	+5%	-5+7%	-5+7%
Ripple & Noise (mV)	50mV	50mV	120mV	120mV
Available Power	105.6W	160W		396W
Total Power	450W continuous maximum at full load			
OUTPUT (400W)				
Output Voltage	+3.3V	+5V	+12V1	+12V2
Max. Load	30A	30A	15A	17A
Min. Load	0.5A	0.3A	1A	1A
Regulation	+5%	+5%	-5+7%	-5+7%
Ripple & Noise (mV)	50mV	50mV	120mV	120mV
Available Power	105.6W	160W		372W
Total Power	400W continuous maximum at full load			
INPUT				
Input Voltage	115/230V			
Input Frequency Range	50-60 Hz			
Input Current	8A RMS MAX. FOR 115VAC, 4.5A RMS MAX.FOR 230VAC			
Hold-up Time	17ms max.			
Efficiency	> 70%			
EMI/RFI	FCC Class B			
ENVIRONMENTAL				
Operating Temp.	0 to 50°C			
Operating Alt.	10,000ft			
MTBF	> 100,000 Hours			
Safety Approval	UL, cUL, CASA, FCC Class B, TUV, CE, CB, NEMKO, BSMI			
RoHS Compliant	Yes			
PFC	n/a			

5. Simple Trouble Shooting

Condition: No Power

1. Check that the power cord is plugged into an electrical outlet and the power switch is at "I" position.
2. Make sure the power connectors are properly and securely attached to all the drives and peripheral devices.
3. If the power supply is installed into a PC case, make sure the connection of the front panel power switch to the motherboard is correct.
4. Turn the power off, wait for a few minutes and turn it back on.
5. If the power supply still has no power, remove all connectors to devices and test the power supply by using a tester. This test is to help rule out any hardware problems. If the fan spins, the power supply is likely to be in good working condition. Please check if the power supply is compatible with other hardware in your PC.

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6. If the power supply still does not power up after following the above instructions, please send the unit back to your dealer or retailer for service.

For feedback about this product, please contact

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For support or general inquiry, please contact

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